

5 What is claimed:

1. A method for use in facilitating electronic communication between first and second user systems that operate in first and second different semantic environments, said first semantic environment differing from said second semantic environment with respect to at least one of linguistics and syntax relating to the subject matter of an electronic communication under consideration, said method comprising the steps of:

providing a computer-based processing tool operating on a computer system;

accessing via said computer system a first quantity of information reflecting said first semantic environment of said first user system, said quantity of information defining a first database;

first operating said computer-based processing tool using said database to identify a set of semantic elements that at least partially define said first semantic environment;

20 accessing a second quantity of information reflecting said first semantic environment, said second quantity of information relating to said electronic communication under consideration;

25 second operating said computer-based processing tool to process said second quantity of information relative to said identified set of semantic elements so as to convert at least a portion of said second quantity of information into a third semantic environment, thereby providing one or more converted semantic elements; and

30 using said converted semantic elements to process said electronic communication under consideration.

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5        2.     A method as set forth in Claim 1, wherein the first quantity of information includes files from the first user system.

10      3.     A method as set forth in Claim 1, wherein the first quantity of information includes one of a product, service or parts list, an invoice, a catalogue, an order form or other business form.

15      4.     A method as set forth in Claim 1, wherein the content of said database is parsed into a first number of objects and said set of semantic elements includes a second number of elements, where said first number is different than said second number.

20      5.     A method as set forth in Claim 1, wherein the step of first operating comprises analyzing a content of said database to provide a set of objects and defining the semantic elements based on the objects.

25      6.     A method as set forth in Claim 5, wherein the set of semantic elements comprises a minimized set that encompasses all of the objects of the set of objects, said minimized set having a first number of semantic elements that is less than a second number of objects of said set of objects.

30      7.     A method as set forth in Claim 5, wherein said set of objects includes a first object and a second object, where each of said first and second objects corresponds to one semantic element of said set of semantic elements.

8.     A method as set forth in Claim 1, wherein the steps of first operating and second operating are performed on different computer systems.

9.     A method as set forth in Claim 1, wherein the third semantic environment is different than the first and second semantic environments.

5       10. A method as set forth in Claim 1, wherein the third semantic environment is defined by a standardized lexicon and standardized syntax rules relating to the subject matter of electronic communication under consideration.

10      11. A method as set forth in Claim 1, wherein the step of using comprises translating said converted semantic elements from one language into another.

12. A method as set forth in Claim 1, wherein said step of using comprises performing a transformation of said converted elements to said second semantic environment, wherein the use of said converted elements reduces the total number of elements involved in said transformation relative to an alternative direct transformation from said first semantic environment to said second semantic environment.

13. A method as set forth in Claim 1, wherein said step of using comprises performing a transformation of said converted elements to said second semantic environment, wherein the use of said converted elements increases the accuracy of said transformation relative to an alternative direct transformation from said first semantic environment to said second semantic environment.

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5        14. A method for use in facilitating electronic communication between first and second user systems that operate in first and second different semantic environments, said first semantic environment differing from said second semantic environment with respect to at least one of linguistics and syntax relating to the subject matter of an electronic communication under consideration, said method comprising the steps of:

10                providing a computer-based processing tool operating on a computer system;

15                first using said computer-based processing tool to access said communication reflecting said first semantic environment and convert at least a portion of said first document into a third semantic environment that is different from both said first semantic environment and said second semantic environment; and

20                second using said converted portion of said first document to process said electronic communication under consideration.

25        15. A method as set forth in Claim 14, wherein the third semantic environment is defined by a standardized lexicon and standardized syntax rules relating to the subject matter of electronic communication under consideration.

30        16. A method as set forth in Claim 14, wherein the step of first using comprises providing a set of semantic elements defining the third semantic environment, parsing the first document into a set of objects and mapping the set of objects to the set of semantic elements.

35        17. A method as set forth in Claim 14, wherein the communication comprises one of a product, service or parts list, an invoice, a catalogue, an order form or other business form.

5        18. A method for use in standardizing electronic business content relating to a given subject matter, comprising the steps of:

first providing a computer-based analysis tool;

second providing a database of information reflecting a first semantic environment;

10      first using said computer-based processing tool to parse content of the database into a set of chunks and provide a user interface that can be used to select specific ones of said chunks for processing;

second using said computer-based processing tool for defining a standardized semantic environment including a set of standardized semantic elements;

third using said computer-based processing tool to select a chunk of said set of chunks and map said selected chunk to a standardized semantic element of said set of standardized semantic elements; and

repeating said step of third using until a desired portion of said set of chunks are mapped into said set of standardized semantic elements.

25      19. A method as set forth in Claim 18, further comprising using said user interface to graphically represent a status relative to mapping of said database content to said standardized semantic environment.

20      20. A method as set forth in Claim 18, wherein said user interface assists in developing rules relative to at least one of defining said standardized semantic environment and mapping chunks to standardized semantic elements such that said steps of defining and mapping need not be performed by a user having specialized linguistic expertise in this regard.

5        21. A method for use in transforming information between first and second different semantic environments, said first semantic environment differing from said second semantic environment with respect to one of linguistics and syntax relating to the subject matter under consideration, said method comprising the steps of:

10            obtaining input information in a first form reflecting said first semantic environment;

15            using a computer-based processing tool to generate processed information, said processed information including first content corresponding to said input information and second content, provided by said computer-based processing tool, regarding a context of a portion of said first content for use in transforming said input information between said first and second semantic environments; and

20            converting said processed information into a second form reflecting said second semantic environment.

25        22. A method as set forth in Claim 21, wherein the second content includes tags that provide said context.

26        23. A method as set forth in Claim 21, wherein the processed information includes content chunks interspersed with tags.

27        24. A method as set forth in Claim 23, wherein the tags are useful for one of defining phrase boundaries, resolving linguistic ambiguities based on context and defining family relationships between chunks.

5        25. A method for use in transforming information for exchange between first and second user systems that operate in first and second different semantic environments, said first semantic environment differing from said second semantic environment with respect to one of linguistics and syntax relating to the subject matter under consideration, said method comprising the steps of:

10            providing a computer-based tool having access to a knowledge base reflecting one of said first and second semantic environments;

15            accessing a communication for transmission between said first and second user systems, said communication having a content reflecting one of said first and second semantic environments;

20            operating said computer-based tool to transform, in substantially real-time, said content relative to a source semantic environment of said communication, thereby providing transformed content; and

25            transmitting said communication between said first and second user systems;

20            wherein said computer-based tool allows for substantially real-time transformation of communications between said first and second user systems.

26. A method as set forth in Claim 25, wherein the computer-based tool is associated with one of the first and second user systems.

25        27. A method as set forth in Claim 25, wherein the tool is associated with a source system with respect to the communication, said source system being a source of the communication.

28. A method as set forth in Claim 25, wherein the computer-based tool is associated with a processing system separate from said first and second user systems.

5 29. A method as set forth in Claim 25, wherein the knowledge base reflects  
the same semantic environment as that of the source of the communication.

30. A method as set forth in Claim 25, wherein the computer-based tool  
transforms the communication into a third semantic environment different from  
the first and second semantic environments.

10 31. A method as set forth in Claim 25, wherein the computer-based tool is  
operative for translating at least portions of the communication.

32. A method as set forth in Claim 25, wherein said knowledge base is based  
on a database of objects reflecting said one of said first and second semantic  
environments and the computer-based tool is operative for performing a  
transformation of a new object different from any of said objects.

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